REMARKS

In the Office Action mailed April 21, 2004, in the above identified application, the examiner rejected applicants' claims 1, 3-7 and 10-15 for alleged anticipation or obviousness in view of the cited Knuth reference, U.S. Patent 3,399,776, considered alone or in combination with additional secondary references. More particularly, the examiner rejected claims 1, 3, 6, 7, 10 and 12 for alleged anticipation under 35 USC 102(b) in view of the Knuth reference. The examiner also rejected the remaining claims 4, 5, 11 and 13-15 for alleged obviousness under 35 USC 103 in view of the cited Knuth reference, considered in combination with Lentz, U.S. Patent 1,861,805 (claims 4, 11, and 13-15) by itself or in further combination with Hoffmann, U.S. Publ. US 2002/0104794 A1 (claim 5). The rejections were made "final".

In response, applicants have amended independent claims 1, 10 and 13 to recite applicants' invention in more detail, and in a manner respectfully submitted to distinguish clearly and patentably from the cited references.

As now presented, claims 1, 3-7 and 10-15 are respectfully resubmitted for reconsideration and allowance, particularly for the reasons noted in the following remarks.

Brief Discussion of The Claims as Now Presented

The invention disclosed and claimed in this application is directed to an improved filter manifold for a water purification system, wherein one or more filter-type cartridges are provided for treating water from a suitable water supply source, and for delivering the treated water from the filter manifold for dispensing, and/or for storage within a suitable reservoir prior to dispensing. Each filter cartridge is adapted for periodic removal from the manifold, and for replacement on an as-needed basis. In accordance with the invention, a fail-safe system is provided for insuring that the water supply is turned off, before a filter cartridge can be removed from the filter manifold.

More particularly, applicants' concept includes a "latch plate" movable between a "latched" position preventing filter cartridge or filter element removal

from a filter manifold, and an "unlatched" position for permitting filter element removal from the filter manifold.

Applicants' concept further includes and incorporates a second, independent and separately movable structure comprising a "lock means" (claim 1) such as a shut-off valve lever or "actuator means" (claims 10 and 13) for movement between a "first" position engaging and obstructing the "latch plate" to retain the latch plate in its "latched" position, and a "second" position disengaged from and thereby permitting "separate" (emphasis added) and independent and thus subsequent movement of the "latch plate" to its "unlatched" position. In the "first" position of the "lock means" or "actuator means", a shut-off valve is open to permit water supply to the filter manifold. However, in the "second" position, the shut-off valve is closed.

In applicants' invention, therefore, when the "lock means" (claim 1) or "actuator means" (claims 10 and 13) is in its "first" position, the shut-off valve is open and the "latch plate" is engaged and retained in its "latched" position for positively preventing filter element removal from the filter manifold. By contrast, when the "lock means" or "actuator means" is in its "second" position, the "latch plate" is disengaged. But the filter element is not released unless and until the "latch plate" is moved as a separate and subsequent action to its "unlatched" position.

Accordingly, as positively recited in applicants' claims 1, 10 and 13 as now presented, a filter cartridge or element cannot be removed from the filter manifold unless and until two specific and independent manipulative steps are performed. First, the lock means/actuator means must be shifted from its "first" position to its "second" position. Second, the "latch plate" must be shifted from its "latched" position to its "unlatched' position. ONLY after these two steps are performed in sequence, then and only then can a filter element be physically separated (as a third step) from the filter manifold.

This filter element removal/replacement procedure is the necessary and inherent result of the physical structure recited in applicants' claims. Importantly, this procedure is substantially fail-safe, since the filter element is locked onto the filter manifold unless the shut-off valve is closed. That is, unless the shut-off valve is closed as the first step of the procedure, the "latch plate" remains

engaged and locked in the "latched position" for positively prohibiting any attempt to remove the filter element.

Applicants respectfully contend that the above-discussed structure recited in the claims as now presented in not anticipated or rendered obvious by the Knuth reference, considered alone or in combination with any other reference of record. In this regard, applicants note and disagree with the examiner's characterization of Knuth as disclosing a "two step process" (Office Action, p. 11, para. 20). Knuth clearly fails to disclose or suggest any "lock means" or "actuator means" that engages and obstructs a "latch plate" in one position, but is movable to a second position disengaged from and thus permitting "separate" and independent movement of the "latch plate".

Accordingly, applicants claims as now presented are believed to distinguish patentably from the references of record.

Discussion of the Cited References

As previously noted herein, all rejections asserted by the examiner in the Office Action rely primarily or entirely upon the cited Knuth reference. According to the examiner, Knuth "in fact, discloses a two step process of shutting off water flow ... by the movement of the latch plate/lever ... and by moving the latch plate/lever assembly" (Office Action, p. 11, para. 20).

Simply stated, the examiner's characterization of Knuth is wrong. Indeed, the examiner's error is plainly self-evident from the examiner's own statement quoted in the preceding paragraph. Specifically, the examiner alleges "a two step process" by (i) movement of the latch plate/lever, followed by (ii) moving the same latch plate/lever assembly. These structures are one and the same. The examiner in contending that Knuth discloses "a two step process" by allegedly moving the latch plate/lever, and the by moving it again. This does not happen in Knuth.

To the contrary, Knuth moves his latch plate/lever assembly once, and once only to release the filter element from the filter manifold. Nothwithstanding the examiner's remarks in the Office Action, this is a ONE STEP process in Knuth.

More particularly, and at the risk of partially restating applicants' prior-filed remarks regarding Knuth, Knuth discloses a filter housing 20 that is normally connected in flow-coupled relation with a filter manifold by valved couplers 30 and 31, wherein the valved couplers each include a nipple 32 on the filter housing and a sleeve 36 on the filter manifold. The nipples 32 and sleeves 36 apparently incorporate internal valves that open when the nipples/sleeves are interconnected and close when the nipples/sleeves are disconnected. The examiner now clearly characterizes these "valved couplers 30 - 31" as counterparts to applicants' claimed "shut-off valve" (Office Action, p. 11, para. 21).

When Knuth desires to remove the filter housing 20 for replacement, a handle 41 (embodiment of FIGS. 1-5) or 61 (embodiment of FIGS. 6-9) is manually moved. The handle 41, 61 is connected to a cam or cam-like structure for shifting a plate 35 toward an elevated position releasing the lock balls 50 within the sleeves 36. Col. 2, lines 49-59 and col. 3, lines 34-48. That is, plate movement is concurrent with handle movement; unlike applicants' claimed invention they are not moved separately or in sequence. It's not clear from Knuth whether this movement of the handle 41, 61 causes the valved couplers 30, 31 to actually disconnect, or whether it simply unlocks the release balls 50 so that the filter housing 20 can be manually grasped and removed with a motion that concurrently disconnects the valved couplers 30, 31, and thereby closes the valves in the sleeves 36.

Regardless, Knuth's handle 41, 61 and plate 35 are moved together in a single motion, through a single stroke, in a single process step, to release the lock balls 50 and permit filter housing removal from the filter manifold. Contrary to the examiner's assertions in the Office Action, Knuth's components are not moved twice, whereby such handle movement does not and cannot comprise a two step process.

With specific reference to the language presented in applicants' independent claims 1, 10 and 13, Knuth's handle 41, 61 is not moved from a "first position engaging and preventing movement" of a latch plate, and a "second position disengaged from and thereby permitting separate" and thereby subsequent movement of the latch plate between its own "latched" and

"unlatched" positions. Moreover, Knuth's handle 41, 61 does not operate and close a shut-off valve as a preliminary step prior to separate and subsequent movement of a latch plate to an unlatched position, which in turn permits separate and subsequent separation of a filter element from the filter manifold.

At best, even if movement of Knuth's handle 41, 61 is construed as positively causing disconnection of the valved couplers 30, 31, for purposes of contending that those valve couplers comprises a "shut off valve", such disconnection occurs concurrently with filter housing separation from the filter manifold. By contrast with applicants' claims, such movement of Knuth's handle 41, 61 does not and cannot disconnect the valved couplers (*i.e.*, close the shut off valve, as alleged by the examiner) as a preliminary step prior to separate and subsequent movement of a latch plate to an unlatched position. That is, applicants' claims require the shut off valve to be closed as part of the first step which includes disengagement of the latch plate, followed by subsequent movement of the latch plate to permit filter element removal, followed in turn by actual filter element removal from the filter manifold. Knuth does it all in one step, *i.e.*, he shifts the lever 41, 61 to unlatch the filter housing 20 substantially concurrently with closure of the valved couplers 30, 31, substantially concurrently with removal of the filter housing.

Assuming that the examiner is construing Knuth's handle 41, 61 as the "lock means" (claim 1) or the "actuator means" (claims 10 and 13) recited by applicants, then Knuth has no separate "latch plate" that is "disengaged" by movement of the handle 41, 61, followed by separate and subsequent movement of that "latch plate" to release or unlatch the filter housing. Alternately, if the examiner is construing Knuth's handle 41, 61, as the "latch plate" recited by applicants, then Knuth has no separate "lock means" or "actuator means" that is moved before the latch plate to close the shut off valve and also to disengage from and thereby permit subsequent, separate movement of the latch plate.

Accordingly, applicants' independent claims 1, 10 and 13 clearly recite a concept that is not anticipated by or rendered obvious in any way by Knuth. Applicants also contend that the remaining references of record fail to provide

any teaching or suggestion capable of overcoming the above-discussed deficiencies of Knuth.

Applicants further contend that the accompanying revisions to independent claims 1, 10 and 13 do not raise any new issue requiring a new search, for purposes of refusing entry of this Response. In their previous form, these claims recited the separately movable "lock means" or "actuator means" in combination with the "latch plate". As previously submitted, applicants required initial movement of the "lock means" or "actuator means" for "permitting" movement of the latch plate from its latch to unlatched positions. This prior language did not require the "lock means" or "actuator means" to physically displace the latch plate as part of the first process step. The accompanying claim amendments merely emphasis these separate movements in more detail, but they do not represent new matter or raise new issues

Conclusion

In conclusion, in view of the foregoing discussion, claims 1, 3-7 and 10-15 are believed to distinguish clearly and patentably from the cited references. A formal Notice of Allowance is believed to be in order, and is therefore respectfully requested.

Respectfully submitted,

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